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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/211,538 12/15/98 ZHAO

Z 3064-128

EXAMINER

MMC2/0117

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ART UNIT

PAPER NUMBER

2862

DATE MAILED:

01/17/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/211,538

Applicant(s)

Zhao

Examiner

Henry Andersen

Group Art Unit
2862



☒ Responsive to communication(s) filed on Oct 5, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-4, 6-9, 11-13, and 15-35 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 1, 2, 4, 6-9, 11-13, 15-19, and 28-32 is/are allowed.

☐ Claim(s) _____ is/are rejected.

☒ Claim(s) 3, 20-27, and 33-35 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Dec 15, 1998 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Response to Amendment

1. The amendment filed October 5, 2000, concerning the claims, and the substitute specification, also filed October 5, 2000, have been entered.

NOTE: All references to specification page numbers and lines in this Office action refer to the marked-up copy of the specification filed October 5, 2000.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) for the following reasons:

- A. In Fig. 15A reference character "20" has been used to designate both the magnetic rotational position sensor and a part of it, the loop pole piece. The loop pole piece should instead be assigned reference character "21" (see Page 45, line 12).

- B. In Fig. 24C reference character "118" has been used to designate the Hall-effect device in both air gap area 121g and air gap area 121h. The Hall-effect device in air gap area 121g should instead be assigned reference character "18"

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(see Page 62, lines 19-21).

Correction is required.

3. The discrepancies mentioned in paragraphs 2(A) and 2(B) above are in addition to those mentioned in the prior Office action mailed August 1, 2000. In the "Remarks" section of the amendment filed October 5, 2000, the Applicant stated that in response to a Notice of Allowability, the Applicant would file formal drawings obviating the Examiner's objections to the drawings. Please note that 37 CFR 1.121(a)(3)(ii) provides that "(w)here a change to the drawings is desired, a sketch in permanent ink showing proposed changes in red, to become part of the record, must be filed for approval by the examiner and should be in a separate paper." Therefore, no Notice of Allowability may issue until proposed drawing changes have been filed and approved.

4. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

Specification

5. The abstract is objected to for exceeding 150 words. See newly amended 37 CFR 1.72, which took effect November 7, 2000.

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6. The specification is objected to because of terms which are not clear or exact. Some examples of such terms are:

- A. With regard to Page 3, line 19, the word --surface-- should be inserted after “inner.”
- B. With regard to Page 13, line 22, the word “spatially” entered by amendment should be deleted, and the original word --spatial-- reinstated.
- C. With regard to page 42, line 7, in the material previously entered by amendment, reference character “16a” should be changed to --116a--.
- D. With regard to Page 45, line 11, after the word “surface” reference character “1a” should be replaced with --1b--.
- E. With regard to Page 52, line 5, “1A-1D,” which was added by amendment, should be replaced with --1A-1C--. There is no Figure 1D.
- F. With regard to Page 62, line 21, a period should be inserted after “121h”.
- G. With regard to Page 62, line 22, the entry by amendment of “18 is” should be deleted, and --118 are-- reinstated.
- H. With regard to Page 72, line 7, “535a” should be replaced with --535b--.
- I. With regard to Page 72, line 8, “435a” should be replaced with --135a--,
and “435” should be replaced with --135--.

Appropriate correction is required. The Examiner commends the Applicant for significantly

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improving the specification. Nevertheless, as the above objections obtained by spot checking indicate, the entire specification should be checked again for errors.

Claim Objections

7. Claims 3, 20 (and 21-27 which are dependent on 20), 25 (and 26-27 which are dependent on 25), 33 (and 34-35 which are dependent on 33) and 35 are objected to because of the following informalities:

1. A. With regard to Claim 3, both appearances of the word "first" in the second line of the claim should be replaced with the word --second--. Compare this revised language for Claim 3 with the language of Claim 2. Claims 1-3 appear to be based upon the embodiment illustrated in Figs. 1A - 1C.
- B. With regard to Claim 20, line 35, the term "second pole surface" should be replaced with --first pole surface--. See Figs. 28A-28C, which appear to illustrate the embodiment upon which this claim is based.
- C. With regard to Claim 20, line 52, after the word "to" the word --sense-- should be inserted.
- D. With regard to Claim 25, the following wording should be inserted after the present end of line 9: --said third working air gap area and said fourth working air gap area being contiguous,--. This language parallels that of lines 37-38 of

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Claim 20, upon which Claim 25 is dependent, and clarifies how the second magnetic flux sensitive transducer can be locatable within both the third and fourth working air gap areas (Claim 25, lines 11-13).

E. With regard to Claim 25, line 17, after the word "to" the word --sense-- should be inserted.

F. With regard to Claim 25, line 18, after the word "portion" the word --of-- should be inserted.

G. With regard to Claim 33, line 17, the word "first" should be replaced with --second--. This claim appears to be based upon the embodiment illustrated in Figs. 29A-29C.

H. With regard to claim 35, line 2, after the word "second" previously inserted by amendment, the word --magnet-- should be inserted.

Appropriate correction is required.

Allowable Subject Matter

8. Claims 1, 2, 4, 6-9, 11-13, 15-19, and 28-32 are allowable. Claims 3, 20-27, and 33-35 would be allowable if rewritten to rectify the objections raised against them in Paragraphs 7(A) through 7(H) above. Claims 1, 6, 11, 15, and 28 are independent claims which are allowable because the prior art does not anticipate all the elements of each of these claims. Claims 2, 4, 7

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through 9, 12, 13, 16 through 19, and 29 through 32 are dependent claims that add elements to their respective allowable independent claims, and therefore they too are allowable. Claims 1, 6, 11, 15, and 28 claim a magnetic rotational position sensor comprising a loop pole piece connected to a rotating shaft and having flux generating magnets disposed in various positions in the air gap area of the loop pole piece, and a magnetic flux sensitive transducer also disposed in the air gap area of the loop pole piece to measure the change in flux as the loop pole piece undergoes rotation simultaneously with its connected shaft and its various flux generating magnets disposed within the air gap area of the loop pole piece. The prior art does not reveal a magnetic rotational position sensor comprising a loop pole piece having flux generating magnets and a flux sensitive transducer disposed in the air gap area of the loop pole piece in the manner disclosed in the application under examination.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of objection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

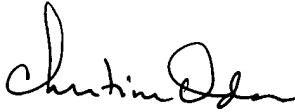
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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication from the examiner should be directed to Henry Andersen whose telephone number is (703) 308-6251. The examiner can normally be reached Monday through Friday between 8:30 A.M. and 5:00 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christine Oda, can be reached on (703) 305-4908. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 and (703) 308-7724.


HSA

January 9, 2001


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